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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,238	12/18/2001	Lance T. Ransom	GP-301069	3698

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EXAMINER

KEENAN, JAMES W

ART UNIT	PAPER NUMBER
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3652

DATE MAILED: 12/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/023,238

Applicant(s)

RANSOM, LANCE T.

Examiner

James Keenan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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1. Applicant's election without traverse of Group I in Paper No. 3 is acknowledged.

Applicant's cancellation of non-elected claims 5-9 is also acknowledged.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In line 2, "loading pickup and carrying" is unclear.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foulke et al (US 4,493,606) in view of Hayashi et al (JP 8-96471).

Foulke et al show an apparatus for loading articles (assemblies) into a rack 14 (fig. 5) having side and bottom dunnage 128, 130, respectively, including slots 132 for receiving individual articles, a robot tool 42 mounted on arm 40 and adapted to load

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articles in the rack, the tool including sensor 400 (figs. 9-11) and compliant support 410-420 (fig. 16) which allows "soft placement" of the article into the rack.

The sensor of Foulke et al senses the slots rather than a sensor hole adjacent the slots.

Hayashi et al show a wafer cassette with sensor holes adjacent slots thereof such that a sensor mounted on a robot arm determines the proper position in the rack from which to pick up an article.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Foulke et al by sensing a hole adjacent each slot, as suggested by Hayashi et al, as this would simply be an art recognized alternate equivalent means of sensing the proper position of wafers in a cassette, the utilization of which would require no undue experimentation and produce no unexpected results.

Re claim 3, although details of the slots are not shown, the examiner takes Official notice that the use of chamfered "lead-in angles" around the periphery of slots in a wafer cassette to guide wafers into position is a well known and obvious design expediency.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Foulke et al in view of Hayashi et al, as applied to claim 1 above, and further in view of Hounsfield et al (US 4,702,667).

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The modified apparatus of Foulke et al does not include a lock for fixing the position of the compliant support.

Hounsfield et al show a robot having a compliant support between an arm and a gripper thereof, wherein a locking device is used to prevent displacement of the compliant support.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have further modified the apparatus of Foulke et al by adding a lock to the compliant support, as shown by Hounsfield et al, so as to provide selective compliance.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Foulke et al in view of Hayashi et al, as applied to claim 1 above, and further in view of Becicka et al (US 5,098,254).

The modified apparatus of Foulke et al does not show a second sensor on the tool for sensing an object in the rack and thus indicating a preload position.

Becicka et al show a robot having a tool with proximity sensors thereon which sense the position of articles previously loaded onto a pallet and thus indicate the proper position of the next article to be loaded. Although not explicitly stated, if no articles were previously loaded on the pallet, this obviously would be sensed as well and the robot would inherently be guided to a "preload" position.

It would have been obvious for one of ordinary skill in the art at the time of the invention to have further modified the apparatus of Foulke et al with a second sensor for

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sensing the location of articles in the rack, including the absence of any articles, as shown by Becicka et al, so that the robot could load articles into the appropriate slot.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Keenan whose telephone number is 703-308-2559.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on 703-308-3248. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

  
James Keenan  
Primary Examiner  
Art Unit 3652

jwk  
12/3/03